Our Shared Future: Priorities for Cannabis Research

Cannabis Networking Event Summary Report 2024

Canadian Centre **on Substance Use and Addiction**

Evidence. Engagement. Impact.

Mental Health Commission of Canada   Commission de la santé mentale du Canada

Our Shared Future: Priorities for Cannabis Research

Cannabis Networking Event Summary Report 2024

Table of Contents

EXECUTIVE SUMMARY

In response to the legalization of non-medical cannabis, Health Canada's Substance Use and Addictions Program provided $10 million in funding to both the Canadian Centre on Substance Use and Addiction (CCSA) and the Mental Health Commission of Canada (MHCC) to study the impact and effectiveness of cannabis policies, regulations, and programs, and to help mobilize this knowledge. The two organizations used the funds to support 70 research teams.

Now that this funding program has concluded, we invited members of these research teams to a networking and planning workshop. The event took place the day before the 2023 Issues of Substance Conference in Vancouver, B.C.

The event had three primary objectives:

○ Strengthen connections among cannabis, mental health, and substance use health researchers.

○ Build a collaborative understanding of current gaps in the evidence and establish future research priorities on cannabis, mental health, public health, and the well-being of people who consume cannabis.

○ Co-create the knowledge needed to produce a report on gaps in cannabis research that policy makers and funding bodies can use to support future decisions.

Everyone involved learned a lot about cannabis and its impact on mental health and well-being during the five years of funding. However, CCSA and MHCC were keen to identify what researchers saw as the remaining gaps in our understanding of how cannabis impacts well-being, particularly related to equity-deserving populations.

At the event, 40 researchers participated in networking and knowledge exchange activities to stimulate discussion and form ideas about which topics or issues a potential second round of research funding could focus on. A wide array of potential future research projects emerged, spanning many topics, populations, and methodologies. We identified eight priority topics for future research. Those topics were grouped into three themes:

○ **Use peer- and community-led research methodologies and conduct more longitudinal studies**. Current cross-sectional research efforts highlight important issues, but long-term funding that supports longitudinal research would provide a clearer picture of the effects of cannabis consumption and the reach and impact of cannabis education initiatives.

○ **Increase the use of harm reduction–focused education**. Such education efforts avoid fear-, moral- and abstinence-based messaging and may support long-term public health goals.

○ **Do more research focusing on youth and equity-deserving populations, including Black people, Indigenous people, people of colour and 2SLGBTQ+**. Understanding these populations' experience with cannabis requires not just further study, but also efforts to incorporate their participation and lived experience into research design and knowledge application.

The eight priority topics or issues identified for future research span many fields of study and populations:

1. **Effects (harms or benefits) on mental health and well-being:** The current literature lacks the nuance required to effectively understand which populations are most at risk from cannabis and how individuals may get the greatest benefit from cannabis use.

2. **Substance use education:** As we emerge from a century of prohibition, substance use education focused on harm reduction is imperative to decrease cannabis-related stigma and increase knowledge of how to reduce harms associated with cannabis use.

3. **Experiences and perspectives of First Nations, Métis and Inuit people:** The impacts of drug use on communities affected by colonization have been addressed in literature. However, the diverse range of First Nations, Métis, and Inuit perspectives on how cannabis does or does not fit into their distinct and various communities, practices, and ways of being, knowing, and doing have not been centred in many conversations about cannabis use in these communities.

4. **Unregulated cannabis market:** There is a need to understand:
   - how and why consumers access unregulated cannabis,
   - the impacts that illegal competitors have on the regulated cannabis industry,
   - the barriers preventing people in the unregulated market from moving to the regulated market, and
   - alternatives to traditional law-enforcement efforts that may help eliminate the unregulated market.

5. **Cannabis and driving:** The number of people who drive after using cannabis appears to be increasing (Brubacher, et al., 2022; Health Canada, 2022). Almost 25 per cent of people who use cannabis report driving within two hours of consuming cannabis at some point in their life, an increase from 2021 (Health Canada, 2022). There is a need for continued education about the potential harms of driving after consuming cannabis. Further research is needed on the timing and duration of cannabis impairment and the impacts on driving.

6. **Standardized THC units:** A standardized THC unit may help protect public health and safety in an evolving and diversifying legal market through product labelling, consumer education, and harmonized research on the relative risk of harms related to cannabis use.

7. **Cannabis use disorder:** There is a need to develop a better understanding of the prevalence of and potential treatment options for cannabis use disorder. Examining approaches to continuity of care around cannabis use disorder is an important next step in responding to this persistent challenge.

8. **Cannabis as a harm reduction tool:** Some research indicates the potential use of cannabis as a harm reduction strategy for people who use opiates (Lau et al., 2015; Fehr et al., 2024). Further exploring this strategy may provide another potentially effective approach in the fight against the drug poisoning epidemic.

Taken together, the three themes and eight priority topics highlight the ongoing needs that the cannabis research community has identified for the coming years. The event produced valuable knowledge and insights, and promoted collaboration while creating new connections between research community members.

BACKGROUND

In the five years since cannabis was legalized for non-medical purposes in Canada, researchers have developed data-collection processes to help us understand cannabis use patterns. According to the Canadian Cannabis Survey, 26 per cent of respondents aged 16 years and older reported consuming cannabis in the past year (Health Canada, 2024). And while most cannabis consumers reported using cannabis three days per month or less, approximately 15 per cent of consumers report daily use (Health Canada, 2024). High-frequency consumption, particularly of high-THC cannabis, presents a greater risk to consumers than infrequent consumption (Steeger et al. 2021). While the health risks of cannabis consumption are far less than those of alcohol or tobacco (Nutt et al, 2007), it is important to assess the potential harms of cannabis in this still relatively new legal and social context to give consumers effective harm reduction information.

Health Canada's Substance Use and Addictions Program provided $10 million in funding to both the Canadian Centre on Substance Use and Addiction (CCSA) and the Mental Health Commission of Canada (MHCC) to study the impact and effectiveness of cannabis policies, regulations, and programs, and mobilize this knowledge. CCSA and MHCC supported 70 research teams with these funds. Between 2018 and 2023, MHCC and CCSA–funded researchers examined a wide range of issues related to cannabis and well-being, with a particular focus on the potential physical and mental health impacts of various cannabis consumption patterns. Researchers also explored the impact of legalization and how cannabis was used in various equity-deserving populations.

Members of these research teams gathered for a research knowledge exchange event in early March 2023 (MHCC and CCSA, 2023). During three days of online meetings, they identified what was learned across the research projects and the challenges the teams encountered. Importantly, they considered how to mobilize the knowledge gained from these projects.

The March knowledge exchange event highlighted the need to develop a clearer sense of the future research priorities that researchers envisioned. CCSA and MHCC engaged Responsum Consulting to facilitate an invitation-only meeting of the research teams ahead of the Issues of Substance Conference (IOS) hosted by CCSA in November 2023. That event had three primary objectives:

○ Strengthen connections between cannabis, mental health, and substance use health researchers.

○ Build a collaborative understanding of the current gaps in the evidence and future research priorities on cannabis, mental health, public health, and the well-being of people who consume cannabis.

○ Co-create the knowledge needed to produce a report on gaps in cannabis research that policy makers and funding bodies can use to support future decisions.

METHODOLOGY

Recruitment

The Our Shared Future: IOS Cannabis Networking Event took place on Sun., Nov. 19, 2023, at the Pan Pacific Hotel in Vancouver, British Columbia. The event was intentionally scheduled to occur the day before the start of the IOS Conference.

Both funding organizations contacted research teams who had received funding through MHCC or CCSA since the legalization of non-medical cannabis in 2018. Initially, one researcher from each team was invited to attend and was offered free registration for the conference as an incentive. Some researchers were unable to attend, so the funding organizations later invited additional members of some research teams to increase the number of attendees and obtain a more diverse and extensive representation of knowledge and expertise at the event. They also recruited cannabis researchers from several affiliated but unfunded organizations.

Attendees

Forty-five individuals registered for the event and 40 participants attended, representing 21 organizations and institutions (see Appendix A for a complete list). The event brought together representatives from academic institutions located from coast to coast, as well as individuals from a number of government and non-government non-profit agencies.

Event Agenda

Responsum Consulting developed the agenda for the event in collaboration with MHCC and CCSA. It included networking and knowledge exchange activities designed to draw out attendees' insights about recent advancements and current gaps in the literature on cannabis and well-being. (See Appendix B for the full event agenda.)

The event began with a networking activity that encouraged attendees to connect with people from other institutions and organizations. It used a deck of playing cards and a set of rules to help participants engage and connect with one another. Attendees were also given guiding questions to prompt discussion. Each attendee was given a playing card and asked to find someone with a card of the same suit. Once they did, they were asked to identify their organization and primary research focus or area of interest in the cannabis field, along with their thoughts on a statement designed to stimulate conversation that was presented on a screen in the room. This pattern was repeated three times.

Attendees were then asked to complete a mock grant proposal activity. Working in groups of three or four, with two groups to a table, they were invited to compose a brief grant proposal outlining a research initiative they would like to see funded. Groups were asked to identify the primary area of research, short- and long-term objectives, proposed methodology, and potential scholarly and societal benefits. They were also asked to state whether their proposed research initiative included any priority populations or was specific to geographical regions.

After completing the activity, participants were asked to pitch their research idea to the other group at the table and decide on a single grant proposal to present to the larger audience. A total of six grant proposals were presented to the full group. Using an online survey tool, participants voted for the research proposal they would most like to see funded. All grant proposal ideas were recorded on a Google form.

The final activity, known as rose, bud, thorn, was an individual reflection activity. Attendees were asked to consider the following:

- A rose: a recent important advancement in the cannabis, mental health, and well-being field(s);

- A bud: an issue or topic related to cannabis, mental health, and well-being that requires further research and exploration; and

- A thorn: a barrier they have faced in advancing their understanding of cannabis, mental health and well-being.

Attendees were encouraged to discuss their thoughts in these three areas with their tablemates over dinner and were also asked to record their responses on a Google form.

After the networking and knowledge exchange event ended, CCSA and MHCC contacted attendees via email and asked them to complete a feedback form reflecting on their experience during the event and providing any final thoughts about the future of research and work in cannabis and well-being.

GRANT ACTIVITY FINDINGS

As noted, attendees engaged in a mock grant proposal activity where they were asked to work collaboratively to outline an important research initiative that fills a gap in the current literature. Participants then voted on the research proposal they most wanted to see funded. Participants submitted 12 grant proposals via an online form. Several themes emerged related to the focus of the research projects, the measurable outcomes or intended impacts, the populations that should be prioritized, and the methodological approaches to be used in the research. See Appendix C for a more detailed summary of each grant proposal submission.

Research Focus

Information Dissemination and Learning Engagement

An analysis of the grant proposal submissions revealed that attendees at the event focused heavily on learning engagement and disseminating cannabis information. Specifically, nine of the 12 grant proposals identified developing education programs, supportive interventions, or public health messaging as the primary goal or a beneficial outcome of their proposed research initiative. Of those nine proposals, two focused on developing educational programs, one as the primary purpose of the research and the other as a long-term goal. One proposal explicitly focused on developing public health messaging, while another identified better public health messaging as a potential societal benefit of their project. Finally, five proposed research initiatives focused on developing intervention programs, three as their primary purpose and two as a potential beneficial outcome.

These data suggest that in the post-legalization era, experts in the field want to ensure that people are well-informed about the risks and potential benefits of cannabis use. Researchers have expressed the need to provide accurate, accessible, stigma-free, culturally informed education, messaging, and interventions to the general public and youth in particular.

Researchers varied in their use of the words education and intervention. This appears to be a semantic distinction that may reflect the general orientation of the research teams regarding cannabis use. Those who use the term intervention appear to focus more heavily on the potential risks and harms associated with cannabis, rather than its possible or perceived benefits and the need for informed or mindful consumption.

Harm Reduction

Most research projects that focused on providing cannabis-related information, education, and intervention highlighted a harm reduction approach. Eight of the 12 grant proposals employed a harm reduction lens, and six explicitly mentioned harm reduction. As well, two proposed research initiatives outlined harm reduction strategies without explicitly mentioning the term. Of the 12 grant proposals, two research teams identified harm reduction as the primary goal of the research, three noted it as a long-term objective or societal benefit, and one project explicitly focused on cannabis use as a harm reduction strategy for people with a substance use disorder.

The harm reduction focus observed in the submitted grant proposals aligns with the Canadian *Drugs and Substances Strategy* issued in October 2023 (Health Canada, 2023b). Harm reduction strategies are based on the idea that some substance use is to be expected in society, and the most pragmatic way to support people who use substances is to reduce the risk of harm associated with drug use without emphasizing or requiring abstinence. Education and intervention programs employing a harm reduction lens take a human-centred approach that puts the dignity, rights, and respect of people who use drugs at the forefront while working to reduce the negative social, economic, and health-related consequences of use (CCSA, 2008; Health Canada, 2023a). Examples of harm reduction strategies in the context of cannabis use may include considering alternative methods of consumption, decreased frequency of consumption or product potency, delaying first-time use, emphasizing awareness of one's mindset and physical and social environment when choosing to consume, and buying through regulated markets. Of note, three of the grant proposals specifically

emphasized the need to examine the impacts associated with obtaining cannabis through unregulated and illegal markets.

Research Outcomes

Unsurprisingly, all the proposed research initiatives identified physical health, mental health, wellness or any combination as outcomes of interest. Several used broad terms such as mental health, health, or wellness without identifying specific aspects or areas. One proposal specifically noted the assessment of anxiety and depression, while two studies identified psychosis as an outcome variable of interest. Of note, three grant proposals also explicitly focused on cannabis use disorder. The overwhelming emphasis on studying the mental and physical health outcomes associated with cannabis use highlights the need to better understand the risks and perceived benefits of cannabis use in the post-legalization era. This is especially important in light of recent statistics indicating that 48 to 51 per cent of people living in Canada view regular cannabis use for non-medical purposes as socially acceptable (Health Canada, 2022).

Priority Populations

When completing the grant proposals, attendees were asked whether their research would focus on any priority populations. Two major themes emerged: a focus on youth and a focus on equity-deserving populations.

Youth

Of the 12 proposed research initiatives, eight focused specifically on youth. There are several possible explanations for this, including the fact that cannabis use in Canada is highest among youth and young adults aged 16 to 24 years (Health Canada, 2024). As well, according to *Canada's Lower-Risk Cannabis Use Guidelines*, the brain is not fully developed until about age 25 years, and it has been found that early cannabis use impacts brain development (Fischer et al., 2017). The heavy emphasis on youth may also reflect the fact that drug policy in general, and cannabis legalization policy in particular, highlights youth protection.

Equity-Deserving Populations

Several of the grant proposals noted their intention to focus specifically on equity-deserving populations. Eight of the 12 research initiatives identified racialized communities as populations of interest, with four specifically highlighting research with Indigenous populations. Two of the Indigenous-focused projects also highlighted self-determination and sovereignty as societal benefits of their proposed work. Notably, three projects also proposed a specific focus on individuals with diverse gender identities and people who are 2SLGBTQ+.

The heavy emphasis on supporting equity-deserving populations aligns with the principles outlined in the Substance Use and Addictions Program's 2023 guidelines for applicants (Health Canada, 2023c). The grant proposals may, at least in part, reflect a desire to develop research initiatives that align with current funding opportunities and address the need for evidence that reflects the lived experiences of equity-deserving groups.

Methodological Approach

When asked how they would conduct their proposed research, attendees outlined various methodological approaches. Of the 12 grant proposals, two suggested exclusively quantitative methods, two submissions proposed using qualitative methods, and three proposals outlined a mixed-methods design.

There was also a clear trend toward promoting peer-to-peer and community-based methodologies. These research approaches align with the principles and proposed guidelines for developing harm reduction initiatives, highlighting the importance of involving people with lived and living experiences (Adams et al., 2022). Such research approaches are also consistent with the principles and guidelines for applicants outlined in the Substance Use and Addictions Program's 2023 call for proposals (Health Canada, 2023c).

ROSE, BUD, THORN ACTIVITY FINDINGS

Over dinner, attendees were invited to share their roses (research successes), buds (areas of research that require more investigation), and thorns (research barriers). The goal of this activity was to allow participants to reflect on how far research on cannabis, mental health, and well-being has come since legalization, and consider what lies ahead. What questions have been answered, what questions remain, and what new questions have emerged as the landscape of cannabis and mental health research has evolved over the last five years and continues to change? Participants were asked to submit their answers online after discussing these ideas with their tablemates.

Roses

When asked to reflect on recent research advancements and successes in the areas of cannabis, mental health, and well-being, some of the overarching themes that event participants identified included increased data availability and access, increased public awareness linked to research developments and knowledge mobilization, and reduced stigma toward cannabis. Specific topics identified as roses include:

- **More available data on the impacts of legalization and consumer habits:** Increased reporting through multiple nationwide surveys, such as the Canadian Cannabis Survey (Health Canada, 2023a) and the NNational Cannabis Survey (Statistics Canada, 2024), has provided deeper insights into the cannabis consumption habits of people living in Canada.
- **Less stigma surrounding cannabis use and research:** Participants identified a reduction in the stigma surrounding cannabis use coinciding with legalization as a success,

in terms of both conducting research and disseminating research findings. The social acceptability of vaping and eating cannabis increased between 2021 and 2022, while the social acceptance of smoking cannabis remained the same (Health Canada, 2022).

- **Balanced approaches to exploring cannabis use and its public health impacts:** Recent research captures a fuller range of cannabis use impacts, including both risks and benefits to mental health and well-being. Previous prohibitive models imposed limitations on research that sought to identify therapeutic or beneficial aspects of cannabis use.
- **Increased education and awareness:** Advances in research and reporting provide a richer body of evidence to pull from when creating public messaging, including information on different types of cannabis products, potency, and frequency of use.
- **Harm reduction:** Positive contributions to harm reduction include tools such as *Lower-Risk Cannabis Use Guidelines* (Fischer et al., 2017), lower risk use guidelines developed specifically for young people (Moebes et al., 2023), and other educational resources and projects that promote harm reduction practices for consumers.
- **Reduced criminalization:** There was an overall 25 per cent decrease in police-reported data on cannabis-related arrests from 2020 to 2021 (Moreau, 2021). However, data on youth-related criminalization has shown some disparity in the criminalization of youth populations (Haines-Saah & Fischer, 2021) and the over-policing of racialized communities (Wiese et al., 2022).

- **Better understanding of the relationship between cannabis and mental health:** There has been an increase in examining the nuances of cannabis use and the role that product potency and frequency of use have on mental health and psychosis. Additional research by clinicians exploring potential treatment options and recommendations for reducing the risks and outcomes associated with cannabis and psychosis may provide opportunities to prevent and treat one of the biggest potential risks associated with cannabis (Fischer et al., 2023).

- **More clinical trials and studies:** In general, over the past few years — as evidenced by the funding programs offered by CCSA, MHCC, and other bodies — research exploring various cannabis-related topics has increased.

Buds

Feedback from event participants about areas of cannabis research that present opportunities for further investigation can be summarized with the following key themes:

- **Peer-based intervention and harm reduction:** There is a demand for intervention research, particularly community-led and peer-based approaches, in some cases led by youth or people who use cannabis. Participants also noted the need for more harm reduction strategies that meet people where they are, without the inherent goal of abstinence. This can include delaying first use or reducing frequency of use.

- **Research on cannabis and driving:** Participants expressed a desire for more research on the effects of cannabis on driving and on developing roadside testing methods as there are limitations to current methods. Further research should explore prevention and detection efforts to reduce the harms associated with cannabis-impaired driving.

- **Cannabis as harm reduction:** Further exploration of cannabis as a harm reduction strategy for people using unregulated substances is needed. Research has already identified the potential use of cannabis as substitution therapy for people engaging in higher risk substance use (Mental Health Commission of Canada, 2023). Given high levels of drug toxicity, this could prove to be a timely intervention when combined with broader harm reduction services.

- **Human and longitudinal research:** Participants highlighted the need for more experimental human research, which tends to require more extensive licensing and must meet stricter regulations, and more longitudinal studies, which require more long-term funding and may struggle with participant dropout rates. Both were highlighted as necessary to enhance knowledge in this field.

- **Standardization of THC units:** Participants expressed a need for a standardized unit of THC to facilitate consistent measurement. A national standard unit for THC would benefit researchers, clinicians, and consumers (Jugl et al., 2021). Such standardization could help consumers understand cannabis products and make informed choices about their consumption, and could help public health campaigns shape consumption practices.

- **Understanding cannabis use disorder:** Research is moving toward a better understanding of cannabis use disorder, including exploring effective treatments that have the potential to lead to tools for managing cannabis use and identifying problematic use.

- **Cannabis literacy and drug education outcomes:** There is an interest in exploring more longitudinal studies on the impacts of cannabis education reform and reporting on the reach and impact of cannabis education initiatives, and a need to understand the correlation between cannabis literacy and health outcomes.

Thorns

Despite the research advancements and progress being made in a post-legalization landscape, some research barriers still exist. The main barriers identified by event participants can be summarized as:

○ **A lack of stable funding sources to support ongoing work:** Funding was the most commonly identified research barrier, and income was also noted as a barrier to accessing education. Many research projects depend on time-limited funding, such as Health Canada's Substance Use and Addictions Program, and on programs with changing funding priorities.

○ **Strict policies and regulations around research processes:** Event participants noted challenges obtaining ethics board approvals and difficulty sourcing cannabis for research as a hindrance to conducting research on cannabis and its impacts. Three main types of cannabis research are conducted in Canada: non-therapeutic research on cannabis, clinical trials, and observational studies, each with their own licensing requirements and regulations.

○ **Stigma:** Stigma creates barriers to accessing and sharing information, particularly for cannabis consumers' ability and comfort to engage in open, honest conversations with their healthcare providers and navigate the medical system. One participant brought up the stigma that surrounds being associated with the cannabis industry.

○ **Differences in perspectives and biases in research:** Participants had varying perspectives on how cannabis was being presented to the public and in research findings. Some felt there was a bias toward focusing too much on the risks and harms of cannabis in both the media and academic work. Conversely, some felt the benefits and potential medical uses of cannabis were overemphasized to the public, potentially increasing unsafe consumption practices.

○ **Reaching young people and vulnerable populations:** Another barrier identified was the difficulty reaching vulnerable populations. Some communities are less likely to have access to the internet and technology to participate in traditional studies, or they might simply not be as willing or able to participate.

○ **Need for standard unit of THC:** There is a recognized need for a standard unit to measure THC to advance both research and consumer knowledge (Volkow & Watson, 2020).

○ **Mentorship to bring people new to the field:** Some attendees mentioned being new to the growing field of cannabis research and suggested that more mentorship could be helpful.

○ **More education and knowledge sharing:** Despite the work being done in the field and knowledge advancements, more work is needed to ensure this information is shared with the public through awareness campaigns and targeted and tailored drug education interventions.

EVENT FEEDBACK

We asked participants a series of Likert-type scale and open-ended questions about the event using an online feedback form, and 13 participants provided feedback. They could provide their name if they desired.

All 13 respondents said they were satisfied with the event, felt that it provided an opportunity to connect with new people, found the event engaging, and believed the conversations at the event were valuable. Respondents unanimously agreed with the statement, "I felt comfortable sharing my thoughts, opinions, and ideas during the event."

The variety of activities during the event impressed respondents. People said the activities were engaging and innovative. One respondent commented, "The card activity was what I liked most about the event. It offers a relaxed, safe space to discuss and learn about emerging trends in the cannabis industry, and not just with one particular group, but with several individuals." The intimate nature of the event and the opportunity to meet new people during the activities were cited as important factors in making the event so enjoyable.

While many respondents indicated that they enjoyed the rose, bud, thorn activity, and we received numerous responses to the activity itself, it was noted that some people might have been tired by that point in the event, as many had flown into British Columbia that day from across the country. As a result, the submissions may have lacked the depth possible with fresher minds.

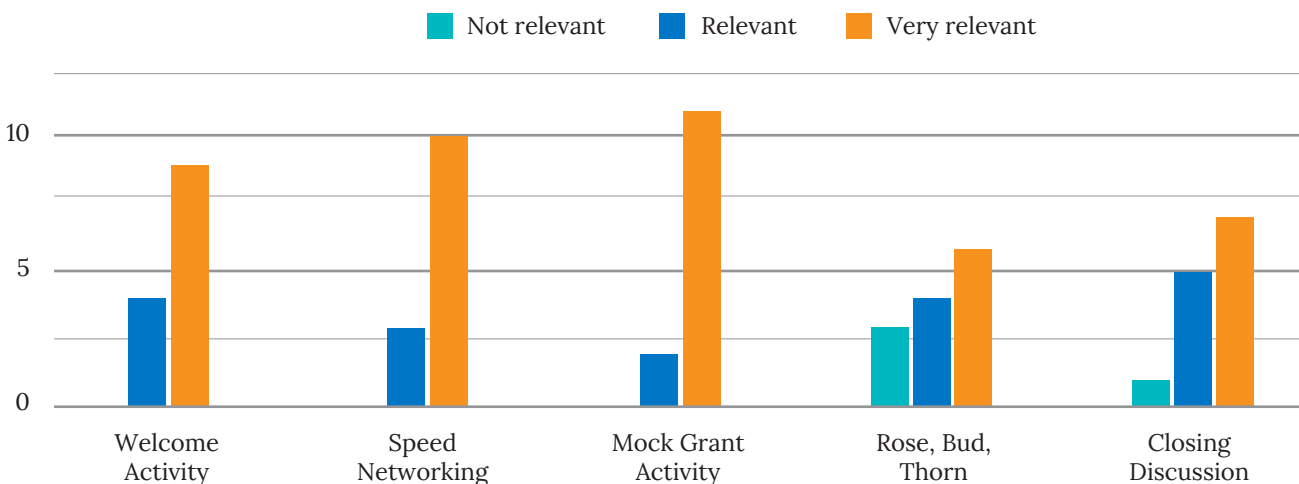How relevant were each of the sections of the event for you?

Figure 1: Participant feedback on the relevance of the event

FUTURE EXPLORATION

Throughout the event, we asked participants to turn their gaze toward the future and consider what areas of cannabis and well-being they thought funders and researchers should focus on over the next five years. Through creative and engaging activities, participants generated invaluable data highlighting the broad spectrum of topics they felt needed further exploration. This section explores eight key topics that should be considered priority areas for future research and examines three themes that provide an overarching context to the topical considerations.

Priority Topics for Future Exploration

Collectively, data gathered during the event highlight several topics and methodological approaches that are important areas of exploration moving forward.

- **Effects (Harms and Benefits) of Cannabis on Mental Health and Well-being**

  There has been extensive research on the potential harms of cannabis in certain populations; however, far fewer studies have examined the benefits. The literature lacks the nuance required to effectively understand which populations are most at risk and how people may get the greatest benefit from cannabis use. Future research must more clearly identify how we can support health and protect against potential harm.

- **Substance Use Education**

  There is an imperative need for harm reduction-focused substance use education. Future work should ensure a balanced approach to evidence-based education, developing initiatives that are tailored to specific groups, youth-led, culturally specific, and delivered via peer-to-peer and community-based approaches.

- **Experiences and Perspectives of First Nations, Métis and Inuit People**

  The impacts of drug use on communities affected by colonization have been widely discussed. However, many conversations about cannabis use in First Nations, Métis, and Inuit communities have not centred the diverse range of First Nations, Métis, and Inuit perspectives on how cannabis does or does not fit into their distinct and various communities, practices, and ways of being, knowing, and doing. Experts in the field have highlighted the importance of moving away from a pan-Indigenous lens and ensuring the work is distinction- or community-based to address specific needs. Work in this area also highlighted the importance of sovereignty and self-determination as outcomes associated with cannabis research led by First Nations, Métis, and Inuit communities.

- **Unregulated Cannabis Market**

  The persistence of the unregulated cannabis market, however diminished, remains a concern. There is a need to understand the impact of the unregulated market in a variety of areas. These include how and why consumers access unregulated cannabis, the impacts on the regulated cannabis industry due to illegal competitors, barriers for people in the illegal market to transition to the regulated market, and alternatives to traditional law-enforcement efforts that may help to eliminate the unregulated market. Legalized cannabis offers the opportunity to bring unregulated actors into the legal market and support the transition away from illegal activity.

○ **Cannabis and Driving**

Close to 25 per cent of cannabis users report they have driven within two hours of consuming cannabis at some point in their lives (Health Canada, 2022). This issue is most prevalent among men aged 20 to 24 years, but some evidence suggests driving after using cannabis is also on the rise for adults aged 50 years and older (Brubacher et al., 2022). These statistics highlight a need for continued education about the potential harms of driving after consuming cannabis. Further research is needed on the timing and duration of cannabis impairment and its impacts on driving. Additional public education on the dose and duration of impairment among people with varying tolerance levels and via different modes of consumption and types of products would be beneficial.

○ **Standardized THC Units**

One way of helping people make lower risk decisions about their cannabis consumption habits would be to develop a standardized THC unit that would help people understand the products they buy and how much they want to consume to achieve their desired effects. Such standardization would also support research efforts employing consumption-based testing methods, clinical trials, and collecting population-level data through surveys.

○ **Cannabis Use Disorder**

There is a need to develop a better understanding of the prevalence of and potential treatment options for cannabis use disorder. Examining approaches to the continuity of care around cannabis use disorder is an important next step in responding to this persistent challenge.

○ **Cannabis as a Harm Reduction Tool**

Some research indicates the potential use of cannabis as a harm reduction strategy (Fehr et al., 2024; Lau et al., 2015). More specifically, cannabis may be used as a substitute for people who regularly consume opiates or stimulants. Further exploration of this strategy is needed. This is an important area of investigation, given the significant harms presented by the toxic drug poisoning crisis.

Themes for Future Research

While the topics outlined above cover various academic fields, potential community partners, and funding sources, they are united by three key themes:

○ A need for longitudinal research, along with funding to support it;

○ More harm reduction-focused education on cannabis and substance use; and

○ A renewed focus on incorporating youth and equity-deserving groups — including Black people, Indigenous people, people of colour, and 2SLGBTQ+ — as researchers, and helping these communities meet their own cannabis-related research and education priorities.

The first major theme we have identified is a need to explore issues using longitudinal studies of select populations. Current cross-sectional research efforts highlight important issues, but long-term funding to support longitudinal research would provide a clearer picture of regular consumers' experience. This kind of research does not produce results in the short one-to-three-year funding cycles commonly seen in grant programs focused on cannabis or substance use. As the legal cannabis market stabilizes, the pandemic as a confounding factor recedes, and we move into a longer post-legalization period, we will need to engage in longitudinal research to identify how different populations experience potential harms or benefits from their cannabis use over the course of their lives.

Second, the need for harm reduction-focused educational programming was consistently present as a direct component of the data emerging from the activities or as a subtheme of the other issues being discussed. An attitude shift is clearly taking place in the cannabis space, and almost all participants seemed open to incorporating evidence-informed, harm reduction information in future work. Such educational efforts must be tailored to specific populations and types of consumers.

Related to this, the third theme to emerge was

the need to focus future research on specific populations to better understand their unique experiences and needs. While broad, nationally representative data is already captured in the Canadian Cannabis Survey. This event highlighted the need to pursue new research initiatives related to populations whose experiences may not be clearly visible in the national survey data. Broadly, this includes youth, equity-deserving populations and others who may have been overlooked in pre-legalization studies focusing on general population measures of cannabis use and other indicators. Black people, Indigenous people, people of colour, 2SLGBTQ+, and youth populations' experience with cannabis require not just further study but also efforts to incorporate their lived experience into research design and applied policy.

By examining this event's overarching themes and specific priority topics, future funders, researchers, community groups, and policy makers are well-positioned to launch the next wave of cannabis and well-being research initiatives.

CONCLUSION

The Our Shared Future event successfully achieved its intended objectives. Participants developed creative and thoughtful grant proposals, identified potential future trajectories for their own cannabis research, and engaged in a successful series of networking and connection-building activities. Most importantly, the feedback from the event shows that people felt safe sharing their ideas.

We learned there is a key focus on equity-deserving populations and creating a better understanding of how people use and engage with cannabis over the long term. Participants were interested in exploring harm reduction practices and how peers and other community actors can successfully promote them, and in creating tools to help us better understand how much and how frequently people consume cannabis.

The grant activity highlighted that there is no single methodology or one-size-fits-all approach to capture this information. The only true consistent elements were a need for longer-term exploration of cannabis use in various populations and more community-led work. Harm reduction played a major role in these discussions. Harm reduction is a complex and difficult topic to discuss when talking about cannabis because of the nuance required — including a consideration of both the potential harms and benefits of using the substance — and the long history of prohibition. It is important that the research community continues to evaluate the effectiveness of harm reduction messaging and approaches to cannabis education.

This event only represents a limited set of individuals who are already doing research in this area based on previous funding. This group has a pre-existing knowledge base and preconceived ideas about the topics and methodologies they were comfortable incorporating into future research. As such, the scope and focus of their potential research areas may not represent the full breadth of cannabis research activity possible in the coming years by researchers in Canada. Also, the three-hour length of the event and the potential exhaustion of participants who had travelled across the country that day may have limited the depth of engagement.

Despite the short length of the event and the long day for participants, this event clearly demonstrated the importance of holding similar events in the future. It allowed researchers from across the country to meet in a collaborative space, learn from one another, and engage in the kind of dialogue that is not always possible online or at more formal events. The knowledge they exchanged came not from a PowerPoint or a paper, but from people invited to collaborate and build a new shared idea from their individual expertise and history. People of various ages, working in different institutions, different geographic locations, academia and the non-profit sector gathered to create a special space full of excitement, rigour, collaboration, learning, listening, and growth. Such interactions have incredible value in creating a body of scholars who can work together to solve long-standing and evolving questions about cannabis.

REFERENCES

Adams. A., Ferguson, M., Greer, A. M., Burmeister, C., Lock, K., McDougall, ... Buxton, J. A. (2022). Guideline development in harm reduction: Considerations around the meaningful involvement of people who access services. *Drug and Alcohol Dependence Reports*, 4, Article 100086. https://doi.org/10.1016/j.dadr.2022.100086

Brubacher, J. R., Chan, H., Erdelyi, S., Staples, J. A., Asbridge, M., Mann R. E. (2022). Cannabis legalization and detection of tetrahydrocannabinol in injured drivers. *New England Journal of Medicine*, 386(2). https://doi.org10.1056/NEJMsa2109371

Canadian Centre on Substance Abuse (CCSA) (2008). *Harm Reduction: What's in a Name?* Ottawa, Ont.: CCSA. https://www.ccsa.ca/harm-reduction-whats-name

Fehr, F., Lo, L. A., Nelson, K., Diehl, L., Nielson, K., Reddon, H., & Walsh, Z. (2024). Stigma-related barriers to medical cannabis as harm reduction for substance use disorder: Obstacles and opportunities for improvement. *International Journal of Mental Health Nursing*, 33(1), 195–201. https://doi.org/10.1111/inm.13231

Fischer, B., Hall, W., Fidalgo, T.M., Hoch, E., Le Foll, B., Medina-Mora, M., ... Jutras-Aswad, D. (2023). Recommendations for reducing the risk of cannabis use-related adverse psychosis outcomes: A public mental health-oriented evidence review. *Journal of Dual Diagnosis*, 19(2–3), 71–96. https://doi.org/10.1080/15504263.2023.2226588

Fischer, B., Russell, C., Sabioni, P., van den Brink, W., Le Foll, B., Hall, W., ... Room, R. (2017). Lower-risk cannabis use guidelines (LRCUG): A comprehensive update of evidence and recommendations. *American Journal of Public Health*, 107(8). https://doi.org/10.2105/AJPH.2017.303818

Haines-Saah, R. J. & Fischer, B. (2021). Youth cannabis use and legalization in Canada — reconsidering the fears, myths and facts three years in. *Journal of the Canadian Academy of Child & Adolescent Psychiatry*, 30(3), 191–196. PMID: 34381511. https://www.cacap-acpea.org/wp-content/uploads/Youth-Cannabis-use-and-Legalization-in-Canada.pdf

Health Canada. (2022). *Canadian cannabis survey 2022: summary.* https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/research-data/canadian-cannabis-survey-2022-summary

Health Canada. (2023a). *Canadian cannabis survey 2023: Summary.* https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/research-data/canadian-cannabis-survey-2023-summary

Health Canada. (2023b). *The Canadian drugs and substances strategy: The Government of Canada's approach to substance use related harms and the overdose crisis.* Ottawa, Ont.: Health Canada. https://www.canada.ca/content/dam/hc-sc/documents/services/publications/healthy-living/canadian-drugs-substances-strategy-approach-related-harms-overdose-crisis/cdss-report-eng.pdf

Health Canada. (2023c). *Substance use and addictions program: Call for proposals, guidelines for applicants.* https://www.canada.ca/content/dam/hc-sc/documents/services/publications/healthy-living/substance-use-addictions-program-call-proposals-guidelines-applicants/substance-use-addictions-program-call-proposals-guidelines-applicants.pdf

Jugl, S., Sajdeya, R., Morris, E. J., Goodin, A. J., & Brown, J.D. (2021). Much ado about dosing: The needs and challenges of defining a standardized cannabis unit. *Medical Cannabis and Cannabinoids*, 4(2), 121–124. https://doi.org/10.1159/000517154

Lau, N., Sales, P., Averill, S., Murphy, F., Sato, S., & Murphy, S. (2015). A safer alternative: Cannabis substitution as harm reduction. *Drug and Alcohol Review*, 34, 654–659. https://doi.org/10.1111/dar.12275

Mental Health Commission of Canada. (2023). *Closing research gaps on cannabis and mental health: Key findings.* https://mentalhealthcommission.ca/wp-content/uploads/2023/10/Closing-Research-Gaps-on-Cannabis-and-Mental-Health-Key-Findings.pdf

Mental Health Commission of Canada & Canadian Centre on Substance Use and Addiction. (2023). *Cannabis, mental health and substance use health research knowledge exchange event: March 1, 6 and 7, 2023, summary report.* Ottawa, Ont.: CCSA. https://www.ccsa.ca/cannabis-mental-health-and-substance-use-health-summary-report

Moebes, Z. R., Card, K. G., Koenig, B., & Benoit, C. (2023). Lower-risk substance use guidelines accessible by youth. *Substance Abuse Treatment, Prevention, and Policy*, 18(10). https://doi.org/10.1186/s13011-023-00516-3

Moreau, G. (2021). *Police-reported crime statistics in Canada, 2020.* Canadian Centre for Justice and Community Safety Statistics (CCJCSS). https://www150.statcan.gc.ca/n1/pub/85-002-x/2021001/article/00013-eng.htm

Nutt, D., King, L. A., Saulsbury, W., & Blakemore, C. (2007). Development of a rational scale to assess the harm of drugs of potential misuse. *The Lancet*, 369(9566), 1047–1053. https://doi.org/10.1016/S0140-6736(07)60464-4

Statistics Canada. (2024). National Cannabis Survey, 2023. https://www150.statcan.gc.ca/n1/daily-quotidien/240318/dq240318e-eng.htm

Steeger, C. M., Hitchcock, L. N., Bryan, A. D., Hutchison, K. E., Hill, K. G., & Bidwell, L. C. (2021). Associations between self-reported cannabis use frequency, potency, and cannabis/health metrics. *International Journal of Drug Policy* 97, Article 103278. https://doi.org/10.1016/j.drugpo.2021.103278

Volkow N.D., & Weiss, S. R. B. (2020). Importance of a standard unit dose for cannabis research. *Addiction*, 115(7), 1219–1221. https://doi.org/10.1111/add.14984

Wiese, J. L., Watson, T. M., Owusu-Bempah, A., Hyshka, E., Wells, S., Robinson, M., … Rueda, S. (2022). Overpoliced and underrepresented: Perspectives on cannabis legalization from members of racialized communities in Canada. *Contemporary Drug Problems*, 50(1), 25–45. https://doi.org/10.1177/00914509221142156

Appendix A: Organizations in Attendance

Institution or organization	Number of attendees
Canadian Centre on Substance Use and Addiction (CCSA)	2
Canadian Students for Sensible Drug Policy (Get Sensible)	1
Centre for Addiction and Mental Health (CAMH)	4
Dalhousie University	2
Foundry (Victoria Youth Clinic)	1
Habitus Consulting	1
Health Canada	1
Homewood Research Institute	1
Mental Health Commission of Canada (MHCC)	3
Memorial University of Newfoundland	4
Métis Nation of British Columbia	2
Native Women's Association of Canada	1
Nova Scotia Health Authority	1
RADAR	1
St. Francis Xavier University	2
Thunderbird Partnership Foundation	2
Université de Montréal	3
University of British Columbia	2
VoxCann	2
Western University	1
York University	1
Other	2

Appendix B: Agenda

Time	Event or activity
4:30 p.m.	Doors open, arrival and event registration
5 p.m.	Event start
5:10 p.m.	Introduction of Responsum Consulting team and overarching purpose of event
5:20 p.m.	Researcher speed-chatting and networking activity
5:55 p.m.	Mock grant proposal activity
7 p.m.	Plated dinner
7:30 p.m.	Rose, bud, thorn reflection activity
7:45 p.m.	Closing discussion
8 p.m.	Event concludes

Appendix C: Grant Proposal Summaries

1. **Research focus:** Cannabis use and mental health among youth

   Priority population: Equity-deserving groups, including racialized youth, youth from diverse gender identities, and youth who are 2SLGBTQ+

   Short-term objectives: Identify contextual factors that are detrimental and favourable to mental health in the context of cannabis use

   Long-term objectives: Examine and explore changes in contextual factors, cannabis, and mental health over time

   Methodology: Longitudinal mixed-methods design (e.g., interviews, focus groups, arts-based methods)

   Scholarly/societal benefits: Provide harm reduction knowledge to youth; inform interventions

2. **Research focus:** School-based cannabis and drug education

   Priority population: Youth; equity-deserving communities; diversity in geographical location and socioeconomic status

   Short-term objectives: Evaluate the effectiveness of a cannabis and drug education program on youth outcomes, examining differences across communities

   Long-term objectives: Create a case for drug education; evaluate the need for equitable public health investments in schools and communities to promote positive outcomes and reduce negative health and societal challenges (drunk driving, addiction, school absenteeism and dropout rates, teen pregnancy, etc.)

   Methodology: Interventional study

   Scholarly/societal benefits: Evidence-based education and health promotion; promote equitable public health investments

3. **WINNING PROPOSAL**

   Research focus: Examine cannabis-related cultural attitudes and support needs in First Nations (and other) communities to develop community-informed, culturally specific cannabis interventions

   Priority population: First Nations, Métis, and Inuit communities (e.g., youth, Elders, adults, parents); pregnant people; people who are 2SLGBTQ+

   Short-term objectives: Learn about the cultural views, patterns of use, and perceived risks and benefits of cannabis; gather information about cannabis sales in the community

   Long-term objectives: Increase understanding about cannabis based on the two-eyed approach among the community; reduce cannabis-related harms, including mental health burdens, criminalization, cannabis use disorder, and other behavioural harmful impacts of cannabis use.

   Methodology: Mixed-methods study (e.g., knowledge evaluation survey and follow-up interviews with priority populations)

   Scholarly/societal benefits: Provide evidence of diverse views on cannabis across First Nations (and other) communities ; promote social justice, self-determination, and sovereignty in regard to cannabis policy, governance, and programming

4. **Research focus:** Unregulated cannabis use and health

   Priority population: Racialized persons (e.g., Black people, Indigenous people, people of colour) across Canada

   Short-term objectives: Examine perspectives about legal and illegal cannabis use

   Long-term objectives: Examine the health impacts of consuming cannabis from the unregulated market

   Methodology: Qualitative approach (i.e., netnography or ethnography)

   Scholarly/societal benefits: Inform public education and protect public health

5. **Research focus:** Culturally relevant public health messaging; post-legalization impact on First Nations youth wellness; impact of unregulated market

    Priority population: First Nations youth, communities, and families; Elders and Knowledge Keepers; cannabis shop owners; workforce; paramedics and healthcare workers

    Short-term objectives: Apply knowledge translation tools to First Nations communities on-reserve to promote harm reduction and culturally specific public health messaging

    Long-term objectives: Bridge the knowledge

    Methodology: Community-based, peer-to-peer approach

    Scholarly/societal benefits: Address knowledge gaps related to cannabis use among First Nations youth; create culturally specific public health campaigns; engage in harm reduction with youth who use unregulated cannabis shops

6. **Research focus:** Identify community needs and develop holistic, wraparound care and supports for people who use cannabis

    Priority population: Geographical focus on Nova Scotia; youth

    Short-term objectives: Engage people with lived and living experience; provide immediate supports; identify unmet needs and gaps in support services; map community leaders for future support and education

    Long-term objectives: Create a network of supports using a peer-to-peer approach

    Methodology: Qualitative approach (e.g., environmental scan; identifying stakeholders; mapping existing initiatives; focus groups with people with lived and living experience)

    Scholarly/societal benefits: Put theory into practice; identify groups that lack resources and supports; work with the community

7. **Research focus:** Cannabis use in distinct Indigenous communities: examining use patterns, cannabis use disorder, product potency, and community knowledge in relation to mental health

    Priority population: First Nations, Métis, and Inuit communities

    Short-term objectives: Examine associations between cannabis use and mental health

    Long-term objectives: Develop nation-specific harm-reduction education materials

    Scholarly/societal benefits: Increased understanding of cannabis use in distinct groups; community self-determination and sovereignty; harm reduction and improved mental health

8. **Research focus:** Cannabis and driving

    Priority population: Adolescent and youth drivers

    Short-term objectives: Examine the effects of cannabis on simulated and on-road driving at different THC levels; compare driving performance with drug-recognition expert evaluation used by police officers

    Methodology: Experimental design

    Scholarly/societal benefits: Increased knowledge about effects of cannabis on driving and better understanding of THC limits

9. **Research focus:** Examining the impact of dry-cannabis communities (those with laws prohibiting cannabis) on health outcomes

    Priority population: Youth; Indigenous communities

    Short-term objectives: Increased knowledge of the impacts of dry-cannabis communities on long-term cannabis use behaviours, health care use, educational and occupational success

    Long-term objectives: Inform cannabis policies in dry communities

    Methodology: Longitudinal comparative approach

    Scholarly/societal benefits: Provide information about the relationships between cannabis use and mental health in Indigenous communities

10. **Research focus:** Developing a peer-based intervention for safer cannabis use by **youth and young adults**

    Priority population: Youth and young adults

    Short-term objectives: Harm reduction; provide youth with information and learning opportunities to increase knowledge, attitudes, and skills for safer cannabis use

    Long-term objectives: Evaluate the long-term impact of the intervention on mental health outcomes and cannabis use behaviours on youth and young adults

    Methodology: Interventional study; provide peer-led lessons in classrooms on safer cannabis use

    Scholarly/societal benefits: Longitudinal understanding of mental health outcomes related to cannabis use; knowledge mobilization

11. **Research focus:** Examining the national prevalence of cannabis use disorder

    Priority population: People with cannabis use disorder

    Short-term objectives: Developing data infrastructure; examining cannabis use, treatments, interventions, and the illegal market

    Long-term objectives: Develop a national monitoring system for cannabis use disorder

    Methodology: Quantitative approach (e.g., survey data, hospitalization data, treatment centre data)

    Scholarly/societal benefits: Evaluate the impact of cannabis regulations on cannabis use disorder; inform interventions; support the *Cannabis Act* and protect Canadians

12. **Research focus:** Using cannabis as a harm reduction tool among youth with substance use disorder, facing mental health challenges, or both

    Priority population: Youth with substance use disorder; equity-deserving groups including racialized youth, youth from diverse gender identities, and youth who are 2SLGBTQ+

    Short-term objectives: Better understand the motivations, contexts, and outcomes surrounding using cannabis as a harm reduction strategy; obtain multiple perspectives on the use of cannabis as a harm reduction tool

    Long-term objectives: Provide tangible and actionable pathways for advocacy and policy change

    Methodology: Mixed methods, community-based participatory action research